*Nature study.*—The schools are apparently coming into a new era of nature study. The movement which began some twenty years ago and failed very largely because of the inability of teachers to handle this material successfully and because of the lack of suitable textbook material is gradually being renewed in a form which promises to be successful. The new type of material which is now being formulated is the result of a good deal of experimentation in the few centers where nature study has survived the shock of its first failure. This new body of material is in part the result of a growth in the higher school of an elementary general course which for some years past has been tried out in the ninth grade and is now being vigorously advocated as a proper part of the program of the junior high school or of the seventh and eighth grades.

Professor Hessler has written another general science textbook[1] which is explicitly announced as designed for use in the upper grades of the elementary school or the first year of the high school. It does not differ greatly from some of the general science texts now widely in use. It begins with a discussion of the atmosphere and follows this with a discussion of water, mechanical and chemical forces, and other natural phenomena closely related to the subjects treated in the ordinary course in geography.

Somewhat different and more highly specialized in character are the books of the Cambridge Nature Study Series, the latest of which deals with a study of the weather.[2] This book, as indicated by its title, deals with one aspect of nature study and can be introduced into the course at whatever point the teacher finds most advantageous. The book is full of very interesting illustrations of different weather conditions and contains in relatively simple form a description of the scientific methods which are employed in the preparation of weather maps and in the prognostication of weather conditions. It is a type of book which will undoubtedly be of very great interest to pupils and will stimulate in them an attitude toward scientific method which will carry on into other fields. There is, however, a large body of concrete material related chiefly to England. The book ought to be imitated by an American edition which will give an account of the conditions on this continent similar to that which is given for the neighborhood of England.

A third book,[3] prepared in the form of a laboratory guide made up of loose-leaf sections, is one of the general series of nature-study books being worked out by Professor Downing. This volume begins with a study of the common rocks and minerals. This is followed by a study of the stars and solar system. Then come chapters dealing with flying machines, various forms of mechanical propulsion used in simpler weapons such as the sling and bow, balloons, and other mechanical toys. Optical instruments, musical instruments, the telephone, and general mechanical contrivances such as scales follow in subsequent chapters.

There can be no doubt at all that this sort of material will be very eagerly used by pupils in the elementary schools. There has been a general assumption

[1] JOHN C. HESSLER, *Junior Science*, Book One. Benj. H. Sanborn & Co., 1920. Pp. xii+243.

[2] E. H. CHAPMAN, *The Study of the Weather*. London, England: Cambridge University Press, 1919. Pp. xii+131.

[3] ELLIOT R. DOWNING, *A Field and Laboratory Guide in Physical Nature-Study*. Chicago: University of Chicago Press, 1920. Pp. 109.

in the field of elementary nature study that children are interested in plants and animals only and that mechanical toys or facts of physics are to be debarred because physics is an advanced subject which ought to be taken up only in the higher schools. Experience shows in contradiction of this assumption that pupils in the elementary schools are very much interested in all sorts of mechanical toys. The use of flying machines certainly ought to have suggested itself long ago to everyone who is interested in the introduction and development of nature study. Boys read about these mechanical devices with the greatest enthusiasm even when the school gives them no encouragement to do so. That physics is a proper subject of elementary instruction is clearly demonstrated by experience with boys and Mr. Downing has done well to take advantage of this general interest and to put the material in form so that it can be used by teachers in elementary schools.

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*Musical talent.*—The field in which psychological tests have been most successful in determining special talent is the field of music. Professor Seashore began experiments in his psychological laboratory a number of years ago to determine how far different individuals are able to distinguish pitches and how far they are able to produce with accuracy the different notes. He was led by his psychological experiments to devise a number of pieces of apparatus, notably one which makes it possible for a singer to see directly the degree to which he is accurate in striking a note which he is attempting to sound. With this visual control for the note that is being sung the observer is able to learn to produce notes more accurately than when the control is a purely auditory one.

The psychological experiments thus carried out in the laboratory led Professor Seashore to measure the ability of school children, and he devised a series of tests which brought out the fact that many school children are so far defective in their ability to discriminate notes that it is undesirable to spend any large amount of time or effort in trying to teach them music. On the other hand, there are a number of children who go undetected in the ordinary school but have a very high degree of natural ability that can be made the basis of a complete instruction in music.

Professor Seashore has now published in a single volume[1] the results of his different investigations and has supported these investigations by psychological discussions that include material other than that which he has accumulated in the course of his own tests. The various chapters of his new book deal with such matters as the recognition of intensity of sound, the recognition of pitch, time, and rhythm, and the ability to produce notes of pure quality. He has also given in substance the facts referred to in the first paragraphs of this review.

Perhaps the most interesting general chapter in the book is chapter xv in which are summarized the general principles of education to which Professor Seashore has been led in his examination of this special ability. This chapter is an emphatic protest against the uniform training of children in schools. It is a vigorous statement of the fact that there are very significant individual differ-

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[1] CARL EMIL SEASHORE, *The Psychology of Musical Talent. Beverley Educational Series*, edited by W. W. Charters. Chicago: Silver, Burdett & Co., 1919. Pp. xvi+288.